

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

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IS 10720 (1999): Technical Drawings - Simplified
Representation of Bars and Profile Sections [PGD 24:
Drawings]



“ज्ञान से एक नये भारत का निर्माण”

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“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS 10720 : 1999
ISO 5261 : 1995

भारतीय मानक
तकनीकी ड्राइंग — छड़ों और रूपरेखा खंडों का
सरलीकृत निरूपण
(पहला पुनरीक्षण)

Indian Standard
TECHNICAL DRAWINGS — SIMPLIFIED
REPRESENTATION OF BARS AND
PROFILE SECTIONS
(*First Revision*)

ICS 01.100.30; 77.140.60; 77.140.70

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NATIONAL FOREWORD

This Indian Standard (First Revision) which is identical with ISO 5261 : 1995 'Technical drawings — Simplified representation of bars and profile sections' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of Drawings Sectional Committee and approval of Light Mechanical Engineering Division Council.

This standard was originally published in 1983 by adopting ISO 5261 : 1981 'Technical drawings for structural metal work'. ISO 5261 has since been revised in 1995.

In view of the above, the committee responsible for the formulation of this standard has also decided to revise IS 10720 : 1983 by adopting ISO 5261 : 1995.

This standard specifies rules for simplified representation of bars and profile sections in assembly and detail drawings.

The text of ISO has been approved as suitable for publication as Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is especially drawn to the following:

Wherever the words, 'International Standard' appear, referring to this standard, they should be read as 'Indian Standard'.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards which are to be substituted in their place are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 128 : 1982	IS 10714 : 1983 General principles of presentation on technical drawings	Identical
ISO 10209-1:1992	IS 8930 (Part 1) : 1995 Technical product documentation — Vocabulary : Part 1 Terms relating to technical drawings : General and types of drawings (<i>first revision</i>)	do

Indian Standard
**TECHNICAL DRAWINGS — SIMPLIFIED
REPRESENTATION OF BARS AND
PROFILE SECTIONS**
(First Revision)

1 Scope

This International standard specifies rules complementary to ISO 128¹⁾ and ISO 129 for the simplified representation of bars and profile sections in assembly and detail drawings concerning, among others:

- structural metal work consisting of plates and sheets, profile sections and compound elements (including bridges, frameworks, pilings, etc.);
- lifting and transport appliances;
- storage tanks and pressure vessels;
- lifts, moving stairways and conveyor belts.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 128:1982, *Technical drawings — General principles of presentation*.

ISO 10209-1:1992, *Technical product documentation — Vocabulary — Part 1: Terms relating to technical drawings: general and types of drawings*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 10209-1 apply.

4 Complementary rules for the simplified representation of bars and profile sections

The simplified representation of bars and profile sections shall consist of their relevant ISO designation followed, if necessary, by the cutting length, separated by a hyphen. This designation may also be used when filling in an item list (see ISO 7573).

EXAMPLE

The simplified representation of an equal leg angle profile in accordance with ISO 657-1, measuring 50 mm × 50 mm × 4 mm and having a cutting length of 1 000 mm shall consist of the following ISO designation:

Angle profile ISO 657-1 - 50 × 50 × 4 - 1 000

If there is no designation specified in an International Standard or other relevant standard, the designation shall be composed of the graphical symbol followed by the necessary dimensions, in accordance with tables 1 and 2.

1) This International Standard is at present under revision.

Table 1



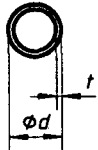
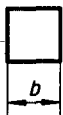

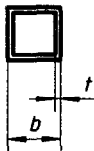
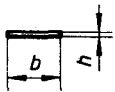

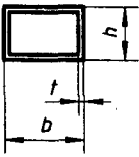


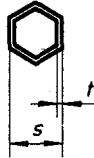
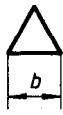

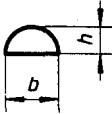

Description of bar section	Dimensions	Designation	
		Graphical symbol	Necessary dimensions
Circular solid section			d
Tube			$d \times t$
Square solid section			b
Square hollow section			$b \times t$
Rectangular solid section			$b \times h$
Rectangular hollow section			$b \times h \times t$
Hexagonal solid section			s
Hexagonal hollow section			$s \times t$
Triangular solid section			b
Semicircular solid section			$b \times h$

Table 2










Description of profile section	Designation		
	Graphical symbol	Alternative letter symbol	Dimensions
Angle section		L	Characteristic dimensions
T-section		T	
I-beam section		I	
H-beam section		H	
Channel section		U	
Z-section		Z	
Rail section			
Bulb angle section			
Bulb flat section			

Table 1 applies to the designation of bar sections.

EXAMPLE

The simplified representation of a rectangular solid bar section measuring 50 mm × 10 mm and having a cutting length of 100 mm shall consist of the following designation:



 50 × 10 - 100

Table 2 applies to the designation of profile sections, and indicates which graphical symbols may be replaced by upper case letters, if appropriate, for simplification.

EXAMPLE

The simplified representation of an angle profile section measuring 89 mm × 60 mm × 7 mm and having a cutting length of 500 mm shall consist of one of the following two designations:

 89 × 60 × 7 - 500

or

L 89 × 60 × 7 - 500

The designation shall be positioned in close proximity to the relevant item (see figures 1 to 3). Figure 3 includes L-shaped profiles for which the graphical symbols are positioned to reflect the arrangement for assembly.

5 Schematic representation of structural metal work

Compound frames of structural metal work can be schematically represented by continuous thick lines (type A, ISO 128) indicating the centroidal lines of the intersecting elements. In this case, the values of the distances between the reference points of the centroidal lines shall be indicated directly on the represented elements (see figure 4).

Closed dimensional chains are permitted. However, in the case of cumulative tolerances, equalization via one of the dimensions shall be indicated.

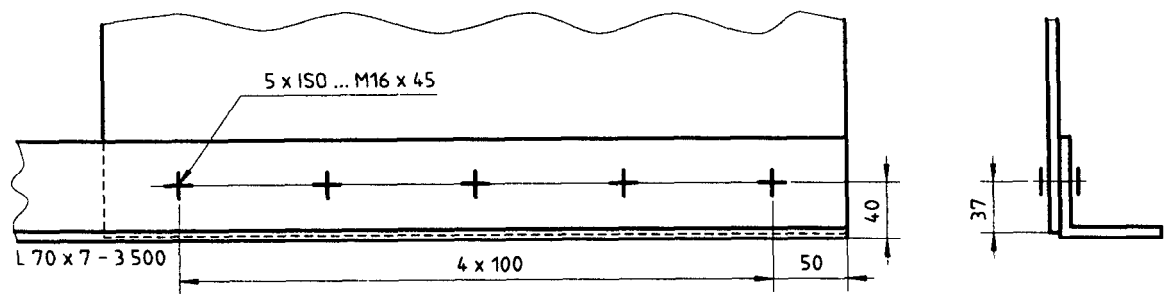


Figure 1

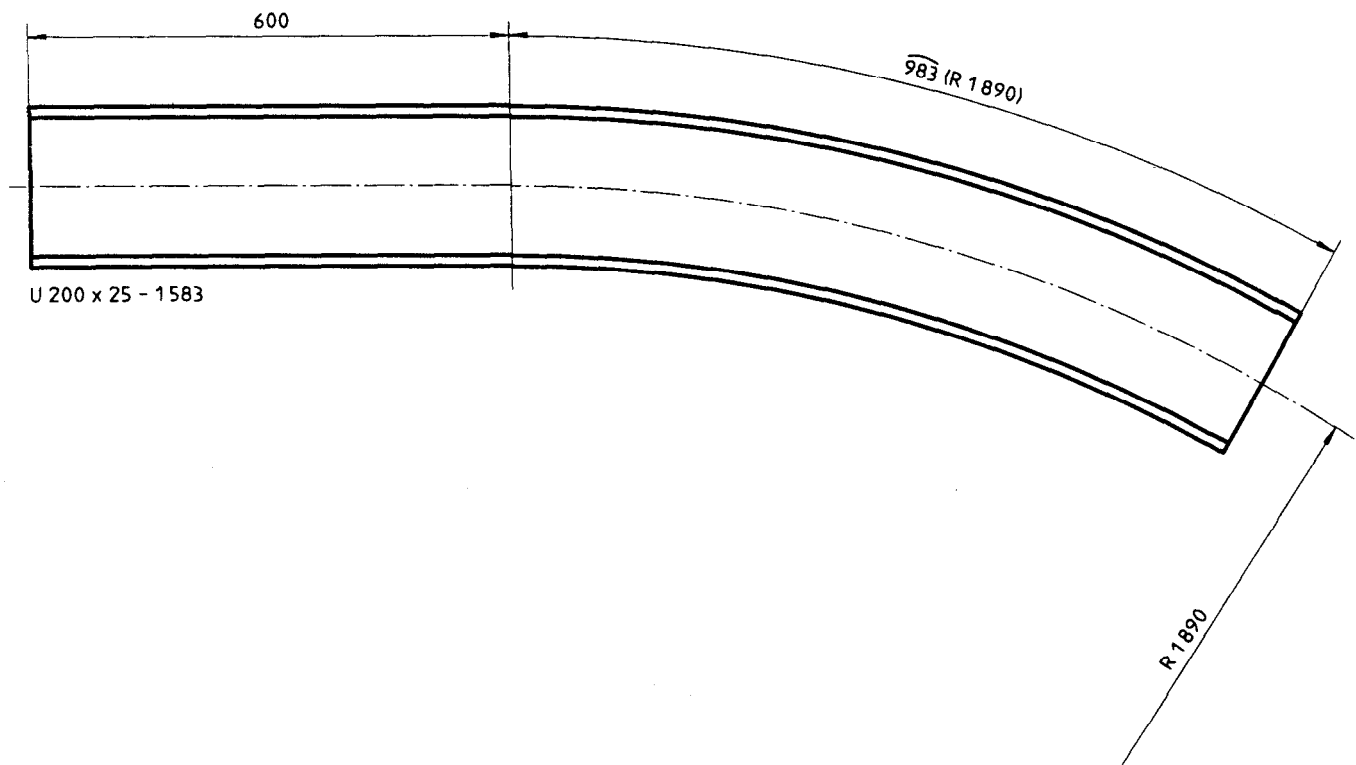


Figure 2

5

Annex A

(informative)

Bibliography

- [1] ISO 129:1985, *Technical drawings — Dimensioning — General principles, definitions, methods of execution and special indications*.
- [2] ISO 7573:1983, *Technical drawings — Item lists*.
- [3] ISO 657-1:1989, *Hot-rolled steel sections — Part 1: Equal-leg angles — Dimensions*.

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Handbook' and 'Standards : Monthly Additions'.

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Amendments Issued Since Publication

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